



LWIR SCIENCE-GRADE CAMERA

FLIR A655sc

With its uncooled, high-resolution detector and cutting-edge functionality, the FLIR A655sc helps researchers and scientists accurately quantify thermal patterns, leakage, dissipation, and other heat related factors in equipment, products, and processes in real-time.

www.flir.com/science

SUPERIOR IMAGE QUALITY & SENSITIVITY

Record crisp thermal images, even at high speeds

- Produce clearly detailed 640 x 480 thermal images using the maintenance free vanadium oxide (VoX) microbolometer
- Detect temperature differences as small as 50 mK
- Record 14-bit, full-frame data at up to 50 Hz, or 200 Hz with windowing

EASY, FLEXIBLE DATA COLLECTION

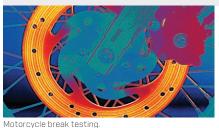
True plug and play connectivity simplifies data monitoring and sharing

- Fast image transfer over GigE Vision, using low-cost standard cables up to 100 meters
- Integrate with FLIR ResearchIR or third-party software seamlessly over Gigabit Ethernet connections
- Control the camera with GenlCam protocol support

ADVANCED SOFTWARE **COMPATIBILITY**

Get more out of your data with advanced analysis tools

- Control and capture data directly intoFLIR ResearchIR Max or MathWorks® MATLAB
- Stream data directly to a PC running software for live viewing, recording, analysis, and sharing.
- Integrate with your proprietary software through optional Software Developers Kit (SDK)



Thermal quality control on domestic appliances.



IMAGING SPECIFICATIONS

System Overview	FLIR A655sc
Detector Type	Uncooled Microbolometer
Spectral Range	$7.5 - 14.0 \ \mu m$
Resolution	640 x 480
Detector Pitch	17 μm
NETD	<30 mK
Imaging	
Time Constant	<8 ms
Frame Rate (Full Window)	50 Hz
Subwindow mode	User-Selected, 640 x 240 or 640 x 120 (Gigabit Ethernet Only)
Maximum Frame Rate (@ Min. Window)	200 Hz (640 × 120)
Dynamic Range	16-bit
Digital Data Streaming	Gigabit Ethernet (50/100/200 Hz) USB(25 Hz)
Command and Control	Gigabit Ethernet, USB
Measurement	
Standard Temperature Range	-40°C to 150°C (-40°F to 302°F) 100°C to 650°C (212°F to 1,202°F)
Optional Temperature Range	Up to 2,000°C (3,632°F)
Accuracy	±2°C or ±2% of Reading
Optics	
Camera f/#	f/1.0
Available Lenses	$6.5\mathrm{mm}(80^\circ),13.1\mathrm{mm}(45^\circ),24.6\mathrm{mm}(25^\circ),41.3\mathrm{mm}(15^\circ),88.9\mathrm{mm}(7^\circ)$
Focus	Automatic or Manual (Motorized)
Close-up / Microscopes	Close-up 25 µm, 50 µm, 100 µm
Image Presentation	
Digital Data	Via PC Using ResearchIR Software

General Operating -15°C to 50°C (572°F to 3,632°F) Temperature Range Storage -40°C to 70°C (-40°F to 158°F) Temperature Range IP 30 (IEC 60529) Encapsulation Bump / Vibration 25 g (IEC 60068-2-29) / 2 g (IEC 60068-2-6) 12/24 VDC, 24 W Absolute Max. Power 0.9 kg (1.98 lb) Weight Size $216\times73\times75$ mm (8.5 \times 2.9 \times 3.0 in) Mounting 1/4"-20 (on three sides), 2 x M4 (on three sides) Power Connector: 2-pole jackable Gigabit Ethernet Port: RJ-45 connector, screw terminal 1000 MB Allowed Voltage Range: 10-30 VDC USB mini-B connector Hardware reset Power indicator



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Digital I/O Connector: 6-pole screw terminal

Digital Out: 2 outputs, opto-isolated 10-30 V supply, max 100 mA Digital In: 2 inputs, opto-isolated 10-30 V

17-1683-INS-A655sc Datasheet



The World's Sixth Sense®

